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[SEVENTH SERIES.]

“..... per litora spargite muscum,
 Naiades, et circum vitreos considite fontes:
 Pollice virgineo teneros hic carpite flores:
 Floribus et pictum, divæ, replete canistrum.
 At vos, o Nymphæ Craterides, ite sub undas;
 Ite, recurvato variata corallia trunco
 Vellite muscosis e rupibus, et mihi conchas
 Ferte, Deæ pelagi, et pingui conchylia succo.”
N. Parthenii Giannettasi, Eol. 1.

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I.—*On the Nomenclature and Distribution of some of the Rodents of South Africa, with Descriptions of new Species.*
 By W. E. DE WINTON.

SINCE the days of Dr. Andrew Smith, until within the last year or two no one has paid much attention to collecting the smaller mammals of South Africa, and while birds and insects have always been flowing in to the home museums, there have only been received one or two chance specimens of mammals.

The result is that several of the animals described by the old writers are very imperfectly known, and great confusion is caused by the want of fresh specimens, most of the original types having been stuffed, the skulls spoiled, and the fur faded.

Thanks to Mr. Colliott Darling and Mr. F. C. Selous we know something of the fauna of Rhodesia (see P. Z. S. 1896, pp. 798–808, for description of the rodents sent home by these two collectors), but there is still much to be learned; and now I have pleasure in bringing forward fresh evidence of an awakening within the older settled districts to the realization of the wants of the home workers.

The British Museum has lately received valuable additions to the collections of small mammals from the south of Cape Colony through the exertions of Dr. Schönland, Curator of the Grahamstown Museum, and presented by that institution, and from Mr. A. Stenning, Curator of the Fish Hatchery, King William's Town; from the Transvaal through Mr. H. P. Thomasset and Dr. Percy Rendall, who have taken much trouble in obtaining specimens; from the neighbourhood of Kimberley by the help of Mr. A. Wolf Curry; and from Namaqualand by Dr. R. Broom. Thanks are due to these gentlemen, who, while busily engaged in their professions, have devoted time and money to the furtherance of science; and I think it only requires to be known how behindhand our knowledge of the mammalian fauna of South Africa is, to induce others to assist in collecting and taking notes on the habits of the small mammals of the country. I would impress on those who wish to help, that no animal is too common, for so little is known as to the distribution of any of the species, and almost nothing of their habits. Specimens are therefore required of all species occurring in different districts.

Instructions for collecting and small requisites for proper preservation may be obtained by communicating with the writer at the British Museum (Natural History), Cromwell Road, London, S.W.

With the assistance of the collections above mentioned some light has been thrown on one or two doubtful points as to the validity of several species of rodents, and it is hoped before long to clear up further questions in regard to other orders of the Mammalia.

GRAPHIURUS, F. Cuv.

(Mamm. pl. ccliv., 1829.)

Both Mr. Oldfield Thomas and myself, following the course taken by other writers when describing closely allied forms, have referred specimens of the smaller dormice of Africa to the genus *Eliomys*. On looking more closely into the matter, it has been found that all the members of the family Myoxidæ found within the Ethiopian Region belong to the genus *Graphiurus* and that *Eliomys* is confined to the Palæarctic Region. Besides the outward form there are many cranial characters which distinguish these two genera; perhaps the most obvious is the difference in the shape of the infra-orbital foramina.

Graphiurus ocellaris, Smith.

- Sciurus ocellaris*, A. Smith, Zool. Journ. iv. (Jan.-May), 1829, p. 439.
Graphiurus capensis, F. Cuv. Mamm. livr. lx. fig. 254 (Sept.) (1829).
 "Autre Loir," F. Cuv. Dict. Sc. Nat. xxvii. p. 124 (1823).
Myoxus Cattoirii, Fisch. Synops. Mamm. p. 310 (1829).
Graphiurus typicus, Smith, S. A. Q. Journ. 1834, p. 145.
Graphiurus elegans, Ogilby, P. Z. S. 1838, p. 5 (juv.).
Graphiurus capensis, Smith, Ill. Zool. S. A., Mamm. pl. xxxix. (1843).
Graphiurus capensis auct.

The above being the synonymy of this animal, it will be seen that Smith's specific name must be allowed priority; this author in his later publications, however, conformed to the specific name given by Cuvier—who had made a new genus for the reception of this species—only because it was the fashion at that date to affix a fresh specific name to any species when transferred to a different genus from that in which it had been placed by the original describer.

Hab. Extreme south of Cape Colony.

Specimens of this animal are much needed, it being extremely rare in collections.

M. Lataste has divided the genus *Gerbillus* into well-marked subgenera ('Le Naturaliste,' 1882, p. 126), a most convenient mode of at once showing the form of the feet, tail, and molar teeth; this code has generally been followed by recent writers, the subgeneric name being placed in brackets, and this method is used below.

Gerbillus (Gerbillus) pæba, Smith.

- Gerbillus pæba*, Smith, Rep. Exped. Int. S. Afr., App. p. 43 (1836).
 ? *Meriones caffer*, Licht. Verzeichn. Auct. Südafr. Nat. Berlin, 1839 (5th Oct.), nomen nudum.
 ? *Meriones binotatus*, id. *ibid.*, nom. nud.
 ? *Meriones rufescens*, id. *ibid.*, nom. nud.
Gerbillus tenuis, Smith, Ill. S. Afr. pl. xxxvi. fig. 2 (1842).
 ? *Meriones caffer*, Wagn. Arch. für Naturg. 1842, p. 18.

Dr. Andrew Smith always thought himself justified in changing a name he had himself given if another more appropriate one suggested itself. The type of *G. pæba* and *G. tenuis* being one and the same specimen, the first name must of course stand for this species.

Hab. Transvaal and Namaqualand.

Gerbillus (Tatera) afer, Gray.

- Mus sericeus*, Temm. MSS. v. Sp. Mus. Leyd., nom. nud.
Gerbillus afra, Gray, Spicil. Zool. x. (1828).

Meriones Schlegelii, Smuts, Enum. Mamm. Cap. p. 41, pl. xliii. figs. 1-5 (1832).

Gerbillus africanus, F. Cuv. Trans. Zool. Soc. ii. 1836, p. 143, pl. xxvi. figs. 5, 9.

Gerbillus afer, Smith, Ill. Zool. S. Afr., Mamm. pl. xxxv. (1842).

? *Gerbillus tenuis*, var. *Schinzi*, Noack, Zool. Jahrb. iv. 1889, p. 134.

This species has a very wide range, forms which so far seem specifically inseparable from the Cape specimens occurring in Mashunaland and Nyasaland.

Gerbillus (Tatera) Brantsii, Smith.

Gerbillus Brantsii, Smith, Rep. Exped. Int. S. Afr., App. p. 43 (1836).

Gerbillus montanus, Smith, Ill. Zool. S. Afr., Mamm. pl. xxxvi. fig. 1 (1842).

Meriones (Rhombomys) maccalinus, Sundeval, Öfvers. Vet.-Ak. Stockh. 1846, p. 120.

The Museum is indebted to Mr. Thomasset for a fine series of this Gerbil, clearly proving it to be distinct from *G. afer*; the species is well figured and described by Smith (Ill. Zool. S. Afr., Mamm. pl. xxxvi.).

Hab. Transvaal.

Gerbillus (Tatera) Lobengulæ, sp. n.

In size and proportions this Gerbil closely resembles *G. afer*. The colour of the dorsal region is pale fawn, very finely grizzled with dull black; on the sides there is no grizzling and the colour pure fawn; an abrupt line divides the colour of the upper parts from the lower, which are all pure white.

The colour of this animal is very constant, and so differs from *G. afer* and *G. leucogaster*, in both of which the general colour is more rufous or chestnut and the grizzling coarser.

The skull differs from its allies chiefly in having a narrower facial portion, being very narrow across the nasals and maxillæ between the infraorbital foramina.

The first upper molars are very persistently cuspidate, the second lobe being divided into a pair of cusps—outer and inner—in fairly adult specimens; and even when the tooth is worn, so that only the separated transverse laminae appear, this second lobe is pinched together in the middle line, and the mesial bridge, showing the full laminated pattern of the tooth, does not appear until even later than in *G. afer*.

Type (♂), British Museum, no. 97. 1. 4. 11. Collector's no. 31. 5th Oct., 1895. Essex Vale, Matabelerland.

Head and body 134 millim.; tail 160; hind foot 34; ear 45.

Skull: greatest length 40; breadth 21·5; nasals, length 16, greatest breadth 4.

This specimen, with others, was collected by Mr. F. C. Selous, and was referred to *G. leucogaster* with doubt by the writer (P. Z. S. 1896, p. 807); but further comparison with younger specimens of *G. afer* and *G. leucogaster* allow of no doubt as to their distinctness, my conclusions being based on six skins and seven skulls of this species and a large number of its nearest allies.

Gerbillus (Pachyuromys) auricularis, Smith.

Gerbillus auricularis, Smith, S. Afr. Quart. Journ. ii. 1834, p. 160.

Gerbillus brevicaudatus, F. Cuv. Trans. Zool. Soc. ii. 1836, p. 144, pl. xxvi. figs. 10-13.

This curious Gerbil, with its short thick tail, is very different from any South-African member of the genus; it inhabits dry sandy districts, especially parts of Namaqualand; but several specimens have lately been received from Mr. A. Wolf Curry, taken in the neighbourhood of Kimberley—the only other member of the subgenus (*G. Duprasi*) being found in the Algerian Sahara.

OTOMYS, F. Cuv.

Otomys, F. Cuv. Dents des Mamm. p. 168, pl. lx. (1825) (nec A. Smith).

Euryotis, Brants, Muizen, p. 93 (1827).

Otomys irroratus, Brants.

Mus irroratus, Licht. MS., nom. nud.

Euryotis irrorata, Brants, Muizen, p. 94, pl. (1827).

Otomys bisulcatus, Cuv. & Geoff. Mamm. livr. lx. fig. 265 (1829).

Euryotis typicus, Smith, S. Afr. Quart. Journ. ii. p. 149 (1834).

Euryotis irroratus, Smith, Ill. Zool. S. Afr. pls. xxii., xxv. fig. 1 (1840).

Euryotis obscura, Licht. Verzeichn. Säug. u. Vögeln Kafferlands, Berlin, p. 10 (1842).

This species is widely distributed, frequenting wet or marshy places. Both upper and lower incisors are deeply grooved and the third upper molar has six enamel folds.

Otomys unisulcatus, F. Cuv.

Otomys unisulcatus, Cuv. & Geoff. Mamm. livr. lx. fig. 264 (1829).

Euryotis unisulcatus, Smith, S. Afr. Quart. Journ. ii. 1834, p. 149; Ill. Zool. S. Afr., Mamm. pl. xxiii. (1840).

Euryotis pallida, Wagner, Wieg. Arch. 1841, p. 134.

Otomys rufifrons, Rüppell, Verzeichn. Mus. Senck. i. 1842, p. 28, nom. nud.; Wagner, Schreb. Säug., Supp. iii. p. 507 (1843).

This species inhabits the southern and eastern districts of the colony, frequenting dry situations. In colour it is somewhat paler than *O. irroratus*, but unless the teeth are examined the two species may be easily confounded. While closely resembling *O. Brantsi* in the pattern of its dentition, it is readily distinguished by its colour. A sure distinction, however, is found in the skull, as described under the next species.

Otomys Brantsi, Smith.

Euryotis Brantsii, Smith, S. Afr. Quart. Journ. ii. 1834, p. 150; Ill. Zool. S. Afr., Mamm. pl. xxiv. (1840).

This species is particularly abundant in Namaqualand, inhabiting dry situations. The upper incisors only are grooved; the last upper molar has only four enamel folds. The skull may be readily distinguished from that of *O. unisulcatus* in having much larger auditory bullæ; the basioccipital and basisphenoid bones are exceedingly narrow and rounded, while in both the other species known to inhabit the Cape Colony these bones are flattened out considerably.

Saccostomus campestris, Peters.

Three specimens of this species have been received, through the Grahamstown Museum, from Mrs. George White of Brak Kloof. The occurrence of this pouched mouse in the neighbourhood of Grahamstown has come as a great surprise, for hitherto the most southerly points from which any member of the genus had been recorded were Mashonaland, where the large dark grey form occurs, and Damaraland, where a pale sandy-coloured form is found*.

From what Mr. Schönland tells me, this animal is generally confused with *Mystromys albicaudatus* by South-African

* In writing on some rodents from Angola (Ann. & Mag. Nat. Hist. 1897, xx. p. 322) I referred some specimens of *Saccostomus* to *S. mashonæ*; but while agreeing with that species in the size and proportion of the skull, so far as can be judged from the material at hand (consisting of three specimens of *S. mashonæ* and five Damaraland skulls of different ages), the specimens from Damaraland and Angola differ so much in colour, being of a light somewhat sandy tint, even paler than *S. campestris*, that I think it desirable to specify them under the name of *S. Anderssoni*; and I take as the type of this new species no. 69. 8. 11. 4 in the British Museum, collected by Mr. C. J. Andersson in Damaraland, this being, in fact, one of the specimens mentioned by Mr. Oldfield Thomas (P. Z. S. 1882, p. 266, pl. xiv.), the figure being drawn to illustrate a new species, but afterwards changed to *S. campestris*, as it was considered wiser not to distinguish the two forms with the material then in the Museum.

naturalists. I need scarcely say that while *Saccostomus* belongs to the subfamily Murinæ, being a short-tailed mouse with cheek-pouches, *Mystromys* belongs to the Cricetinæ, with only two longitudinal rows of cusps in the molars. This latter animal is of so much interest that I shall notice it separately.

Mystromys albicaudatus, Smith.

Otomys albicaudatus, A. Smith, S. Afr. Quart. Journ. ii. 1834, p. 63.

Mystromys albipes, Wagn. Wieg. Arch. 1841, p. 133.

Euryotis lanuginosa, Licht. Verzeichn. Säug. u. Vögeln Kafferlands, p. 10, Berlin (1842).

Malacothrix albicaudata, Wagn. Schreb. Säug., Suppl. iii. p. 498 (1843).

When Dr. Smith founded his genus *Otomys* he overlooked the fact that the name had already been applied by Cuvier to another group of mammals.

The district of Albany was given as the locality from which the type specimen was obtained, and in his later writings this author gives Grahamstown as one of the localities in which he had himself met with it. Now I think it just possible that Dr. Smith confused this species, which he had no doubt obtained north of the Orange River, with *Saccostomus campestris*, a species which he did not recognize, and perhaps labelled such specimens *Mystromys* in the Cape Town Museum, and in this way the confusion may have originated.

Now that we have proof of *Saccostomus* occurring in the southern districts of the Colony, search should be made to find out whether *Mystromys* occurs there also.

Besides the type, which presumably comes from Albany, the British Museum has only specimens of this animal from the Transvaal, received from Mr. Thomasset.

Mystromys has very great interest to naturalists, being the sole representative of the subfamily Cricetinæ found in the Ethiopian Region; but what gives it still higher importance is that it appears to be the living representative of the fossil *Cricetodon* of the Upper Miocene deposits of Europe.

In the absence of further palæontological evidence as to the period during which *Mystromys* has inhabited South Africa, it may be presumed that it reached that portion of the continent only in comparatively recent times, otherwise, if the genus had existed there contemporaneously with the European fossil forms, we should expect to find it in Madagascar; but so far there is no evidence of its ever having existed in that region.

Dr. Smith describes this species as frequenting dry sandy places where there are scattered bushes, and being easily

taken at night with the aid of a lantern, to the light of which it is attracted, when it may be struck with a whip or taken in the hands. It might be mentioned that it is of the greatest importance that the skull is not damaged, so death should be caused by any other means than by a blow on the head.

Malacothrix typicus, Smith.

Otomys typicus, Smith (nec Cuvier), S. Afr. Quart. Journ. ii. 1834, p. 148.

Malacothrix typica, Wagn. Schreb. Säug., Suppl. iii. p. 498 (1843).

This animal was made the type of his genus *Otomys* by Dr. Smith, a genus which consisted of this species and *Otomys albicaudatus* = *Mystromys*; as stated above, the generic name had already been used, which, under the circumstances, may be considered rather fortunate.

The genus *Malacothrix* is placed in the subfamily Dendromyinae, and this species is the only representative of the genus. Specimens are extremely rare in museums. The British Museum is indebted to Mr. A. Wolf Curry for a fine series from Kimberley.

GEORYCHUS, Illig.

(Prodr. Syst. Mamm. et Av. p. 87, 1811.)

GEORYCHUS, subgen. GEORYCHUS, Gray.

(P. Z. S. 1864, p. 123.)

This division includes only *G. capensis*, in which the molars have deep infoldings of enamel on both outer and inner surfaces, the fourth tooth or third molar only appearing in extreme age.

GEORYCHUS, subgen. CRYPTOMYS, Gray.

Georychus, subgen. *Cryptomys*, Gray, t. c. p. 124.

Georychus, subgen. *Cætomys*, id. t. c. p. 125.

Includes all the other members of the genus, in which the molars have only a vestige of an infolding of the enamel on the outer surface of the molars in extreme youth and none whatever even in early maturity, the fourth tooth or third molar appearing at a very early age.

I consider that these two forms are fully worthy of sub-generic rank, though I do not follow all the divisions proposed by Gray.